

FUNCTIONS AND PATTERN OF RURAL SETTLEMENTS

• Introduction: • Settlements can vary in size from the very small to extremely large. They can be small as one house and as large as a megacity, home to tens of millions of people. That can be permanent or temporary. Settlements start in different places for different reasons. • A settlement is an existence of occupancy for shelter where people live Settlement is man's structural transformation towards application to his environment. The study of settlements is largely a product of the twentieth century. • A settlement is man's first step towards adaptation to his environment. Settlement designates an organized colony of human beings, together with their residences and other buildings, (shops , hotels , banks etc .) , the roads , streets which are used for travel .Settlements are located as advantageously as possible with respect to natural features such as water .fuel , food , protection and drainage and access to transportation and communication .

What Is Settlement Geography? Settlement geography is the study of human land, water and resource use, population density patterns, and settlement growth. It is essential to urban planning and urban landscape. Group of people living together forms a settlement. Settlement geography studies these villages, towns, etc. and also the types of relationships they generate. "A human settlement is place inhabited more or less permanent by human groups"

Definition Jordan (1966) "Emphasizes that settlement geography not completely investigates the distributions, but even more the structures, processes and interactions between settlements and its environment (such as soil, geomorphology, economy or society), which produce them." "settlement geography describes and explains the settlements,, location, substance, form and structure, as well as the functions and processes that produced them over time." Settlement geography is the study of human land, water and resource use, population density patterns, and settlement growth.

Nature of settlement Geography : Settlements, facilities built by man in the process of land occupancy and their groupings , from the most expressive feature of the cultural landscape . Settlement clusters or agglomerations may vary in size from a small hamlet and village to metropolis , mega city and megalopolis , and in occupational structure and functional mix from predominantly agricultural and other primary productions to secondary, tertiary and quaternary activities and in their sphere of influence from a village and locality to macro- regions, sometimes of supra - national dimension. The branch of geographical knowledge concerned with the study of patterns and variation in the spatial distribution of settlement features and their groupings on all scales in the present as well as in the past and future may , in general, is called Settlement Geography .

The latter involves description , classification , analysis , synthesis and explanation of networks , linkages , surfaces and hierarchies in their varying combinations as phenomena in the space accessible to man and his technology. Advances in knowledge of the phenomena studied , as a result of improved techniques of data acquisition , monitoring , analysis and display , have encouraged geographers , especially the geographers , to draw on other disciplines to an even greater extent , while focusing the ideas and material so derived on the study and explanation of spatial aerations on the earth ' surface.

Scope of settlement Geography: The primary aim of studying settlement geography is to acquaint with the spatial and structural characteristics of human settlements under varied environmental conditions Settlement site and structure- Internal morphology and external form, field patterns functions and house-types. Settlement geography being an offshoot of social g or a recent most sprout from the venerable trunk of human was mainly concerned with urban settlements before the turn of the twentieth century. As the past is the key to the present and we walk to a certain degree in every village among the ruins of antiquity 18. The themes form proposed for international symposium had at Varanasi in 1971 out lined below comprehensive subject matter of and approaches to the study of settlement geography in general and rural settlements geography in particular

A) Approaches to rural settlement geography: 1) Relation to rural settlement geography. 2) Field survey and first hand observation and data collection. 3) Census records and maps and other historical records 4) Data analysis and mapping development of models Paradigms, hypothesis etc. and 5) Other sources materials such as place names. B) Histogenesis of Rural settlement and settlements pattern 1) Historic culture areas 2) Systems of land division, proprietary grant systems and water rights etc. and their relation to settlement growth patterns. 3) Pioneer settlement areas and their problems and Sequence of occupancies Neolithic, bronze, iron, ages, ancient, medieval and modern periods.

C) Basic Regional Types and patterns of rural settlements. 1) Relation of settlement types and patterns to various physical ethnic and social factors and 2) Relation to systems of agriculture water and soil management and land tenure theories of land use intensity,, zoning, labour and input output costs etc. marketing of products and other locational spatial theories. D) Morphogenesis of Rural settlements : Various geomorphologic form patterns and their relation to various factors. E) Functional pattern of rural settlements: 1) Analysis of functional types of rural settlements, methodology development etc. 2) Functional analysis of service villages and service and trading centers hierarchy of such centres in relation to general central place theory 3) Rural seasonal migration community patterns etc.

Categories of Settlement: Based on above discussed factors, human settlement is categorized as follows: 1) Clustered Settlement: The settlement in which the houses are closely built up and compact is known as clustered settlement. The shape of clustered settlement normally varies from rectangular, radial, to linear. Clustered settlement in India normally found in fertile alluvial plains and in the northeastern states.

2) Semi-Clustered: The settlement, clustering in a restricted area of dispersed settlement normally looks like semi-clustered. Examples of such settlement can be seen in Gujarat plain and some parts of Rajasthan.

3) Hamleted Settlement: Some settlement is fragmented into several units and physically separated from each other is known as hamleted settlement. Examples of hamleted settlement can be seen in the middle and lower Ganga plain, Chhattisgarh and lower valleys of the Himalayas.

4) Dispersed Settlement : The isolated settlement is known as dispersed settlement. Examples of such settlement can be seen in parts of Meghalaya, Uttarakhand, Himachal Pradesh and Kerala have this type of settlement.

Types and Patterns of Rural Settlement: Rural settlements are most closely and directly related to land. They are dominated by primary activities such as agriculture, animal husbandry, fishing etc. The settlements size is relatively small **Definition :** Any settlement in which most of the people are engaged in agriculture, forestry, mining and fishery is known as rural settlement. It is often called as agri-cultural workshop. Types of the settlement are determined by the extent of the built-up area and inter-house distance. In India compact or clustered village of a few hundred houses is a rather universal feature, particularly in the northern plains. However, there are several areas, which have other forms of rural settlements.

There are various factors and conditions responsible for having different types of rural settlements in India. These include A) Physical features: Nature of terrain, altitude, climate and availability of water B) Cultural and Ethnic factor: Social structure, caste and religion C) Security factors: Defence against thefts and robberies.

Rural settlements in India can broadly be put into four types. 1) Compact settlements: 2) Semi-compact settlements: 3) Hamleted settlements: 4) Dispersed settlements:

1) Compact settlements: If the number of villages equals the number of hamlets in an area unit, the settlement is designated as compact. Such settlements are found throughout the plateau region of Malwa, in the Narmada Valley, Nimar upland, large parts of Rajasthan, paddy lands in Bihar, Uttar Pradesh, Vindhyan Plateau and several other cultivated parts of India. In such villages all the dwellings are concentrated in one central site. The inhabitants of the village live together and enjoy the benefits of community life. Such settlements range from a cluster of about thirty to hundreds of dwellings of different forms, sizes and functions. Their size varies from 500 to 2,500 persons in sparsely populated parts like Rajasthan to more than 10,000 in the Ganga plain.

2) Semi-compact settlements: If the number of villages equals more than half of the hamlets, it is semi-compact settlement. These are found both in plains and plateaus depending upon the environmental conditions prevailing there. The dwellings in such settlements are not very closely knitted and are huddled together at one common site. It covers more area than the compact

settlements; the hamlets occupy new sites near the periphery of the village boundary. 3) Hamletated settlements: If the number of villages is equal to half of hamlet number, it is a hamlet settlement. The hamlets are spread over the area with intervening fields and the main or central settlement is either absent or has feeble influence upon others. Often the original site is not easily distinguishable and the morphological diversity is rarely noticed. Such settlements are found in West Bengal, eastern Uttar Pradesh, Madhya Pradesh and coastal plains.

4) Dispersed settlements: If the number of villages is less than half the number of hamlets, the settlement is regarded as dispersed. The inhabitants of dispersed settlements live in isolated dwellings scattered in the cultivated fields. Individualism, sentiments of living freely, Custom of marriage relations are conducive to such settlements. However, these dwellings are deprived of neighborhood communal interdependence and social interaction. Dispersed settlements are found in tribal areas covering central part of India, eastern and southern Rajasthan, Himalayan slopes and land with dissected and uneven topography. Homesteads or farmsteads or wheat producing areas in Punjab, Haryana and western Uttar Pradesh also belong to this category.

Rural Settlement Patterns: Patterns of rural settlements reflect the way the houses are sited in relation to each other. The site of the village, the surrounding topography and terrain influence the shape and size of a village. Rural settlements may be classified on the basis of a number of criteria: 1) On the basis of setting: The main types are plain villages, plateau villages, coastal villages, forest villages and desert villages. 2) On the basis of functions: There may be farming villages, fishermen's villages, lumberjack villages, pastoral villages etc. 3) On the basis of forms or shapes of the settlements: These may be a number of geometrical forms and shapes such as Linear rectangular, circular star like, T-shaped village, double village, cross-shaped village etc.

a) Linear pattern: In such settlements houses are located along a road, railway line, and river, canal edge of a valley or along a levee. Linear pattern is the other most important design of settlements. In the linear settlements, houses are arranged along either side of a road, railway line, river or canal. Such settlements also evolve along the edge of a valley, especially in the mountainous areas, above flood level or along the coast. The development of linear settlements in the hilly areas is largely controlled by terrain and topography. Along the river banks and the sea shore, the flood and water level influence linear settlements.

b) Rectangular pattern: Such patterns of rural settlements are found in plain areas or wide intermontane valleys. The roads are rectangular and cut each other at right angles. Over 50 per cent of the world population lives in rural settlements, and most of the people inhabit the settlements of rectangular pattern. Rectangular settlements mainly develop in productive alluvial plains and wide intermontane valleys. The lanes in the rectangular settlements are almost straight, meeting each other at right angles. The rural settlements of the Sutlej-Ganga plains, especially those which developed on the cross-roads, fall in this category.

c) Circular pattern: Circular villages develop around lakes, tanks and sometimes the village is planned in such a way that the central part remains open and is used for keeping the animals to protect them from wild animals.

d) Star like pattern: Where several roads converge, star shaped settlements develop by the houses built along the roads. The star-like settlements develop on the sites and places where several metalled or unmetalled roads converge. In the star-shaped settlements, houses spread out along the sides of roads in all directions. This pattern is common to both villages and towns, and is caused mostly by new development, spreading out along the major roads. This type of settlements is the characteristic of the countryside's of North-West Europe, plains of Yangtze-kiang, Punjab province of Pakistan and the Sutlej-Yamuna plains.

e) Square Patterns: The square pattern of villages is normally found in agricultural regions. In such type of villages houses are arranged in two or more rows with streets running parallel to each other. Such villages are found having strong agglomeration. Sometimes villages are protected by walls. The entire village is divided into small squares of houses occupying the people of different castes. In the study area Jat, Sangole and Mangalvedhe, Pandharpur and Atpadi Talukas have square pattern of villages, of which Shegaon, Hunnar.

f) T-shaped, Y-shaped, Cross-shaped or cruciform settlements: T-shaped settlements develop at trijunctions of the roads (T) while (Y) shaped settlements emerge as the places where two roads converge on the third one and houses are built along these roads. Cruciform settlements develop on the cross-roads and houses extend in all the four directions. g) Double village: These settlements extend on both sides of a river where there is a bridge or a ferry.

Factors Affecting on Rural Settlement: Rural settlements are most closely and directly related to land. They are dominated by primary activities such as agriculture, animal husbandry, fishing etc. The settlements size is relatively small. Some factors affecting the location of rural settlements are: 1) Water Supply: Usually rural settlements are located near water bodies such as rivers, lakes, and springs where water can be easily obtained. Sometimes the need for water drives people to settle in otherwise disadvantaged sites such as islands surrounded by swamps or low lying river banks. Most water based wet point' settlements have many advantages such as water for drinking, cooking and washing. Rivers and lakes can be used to irrigate farm land. Water bodies also have fish which can be caught for diet and navigable rivers and lakes can be used for transportation.

2) Land: People choose to settle near fertile lands suitable for agriculture. In Europe villages grew up near rolling country avoiding swampy, low lying land while people in South East Asia chose to live near low lying river valleys and coastal plains suited for wet rice cultivation. Early settlers chose plain areas with fertile soils. 3) Upland: Upland which is not prone to flooding was chosen to prevent damage to houses and loss of life. Thus, in low lying river basins people chose to settle on terraces and levees which are "dry points". In tropical countries people build their houses on stilts near marshy lands to protect themselves from flood, insects and animal pests. 4) Building Material: The availability of building materials- wood, stone near settlements is another advantage. Early villages were built in

forest clearings where wood was plentiful. In loess areas of China, cave dwellings were important and African Savanna's building materials were mud bricks and the Eskimos, in Polar Regions, use ice blocks to construct igloos.

5) Defense: During the times of political instability, war, hostility of neighboring groups villages were built on defensive hills and islands. In Nigeria, upstanding inselbergs formed good defensive sites. In India most of the forts are located on higher grounds or hills. 6) Planned Settlements: Sites that are not spontaneously chosen by villagers themselves, planned settlements are constructed by governments by providing shelter, water and other infrastructures on acquired lands. The scheme of villagisation in Ethiopia and the canal colonies in Indira Gandhi canal command area in India are some good examples.

Functions of Rural Settlement: The people living in the rural areas all over the world are engaged and dependent on various primary occupations, viz, agriculture, fisheries, forestry, and mining. 1) Agriculture: Agriculture is the most important occupation. Consequently, the functions of most of the peoples of rural settlements are generally agricultural. Apart from cultivation of crops and domestication of animals the rural settlements perform other functions. Its religious place - Mosque, Temple, Gurdwara or Church - with one or two shops is a center of religious and social activities. The village panchayats (in India) and village councils in other countries perform some administrative and judicial functions. In the socialist countries like Russia, North Korea, and China, the village councils decide when certain crops should be sown, irrigated, or harvested.

2) Fishery: In the rural settlements where fishermen live, the main activity is fishing. The fishing villages are sited on rivers, lakes and sea - coasts and the people look to the water rather than the land to get their livelihood. Although the main occupation of these villages is fishing but this may be combined with some agricultural activity. 3) Gathering of Forest Products and Lumbering: There are numerous rural settlements in the forest areas, which the dominant economic activity is gathering of forest products and lumbering. Such villages are generally small in size and may be found in the Taiga region, forest areas of the SubHimalayan region and hilly tracts like Northeast India, In the forests where lumbering is on a large scale and timber industry has developed, Urban rather than rural settlements are more usual.

4) Small Trade Centers: Generally villages function as small trade centers. They are necessarily exporting their surplus products, which need and efficient means of transport and trading facilities in the nearby areas for the movement of goods and people. Nowadays, the increases in communication, electric power, and machineries in each and every field besides the rise in education have bought many small rural settlements for greater contact, interactions, and increased trade. 5) Pedagogic Function: Rural settlement also performs a pedagogic function. First of all, the village and habitation are for many people miniature reproductions of what a give group considers as an ideal environment. Thus through the rural habitation we can grasp the esthetic and cultural manifestation of rural inhabitants.

Problems of Rural Settlement: Rural settlements in the developing countries are large in number and poorly equipped with infrastructure. They represent a great challenge and opportunity for planners. 1) Supply of water to rural settlements in developing countries is not adequate. People in villages, particularly in mountainous and arid areas have to walk long distances to fetch drinking water. Water borne diseases such as cholera and jaundice tend to be a common problem. The countries of South Asia face conditions of drought and flood very often. Crop cultivation sequences, in the absence of irrigation, also suffer. 2) The general absence of toilet and garbage disposal facilities cause health related problems.

3) The design and use of building materials of houses vary from one ecological region to another. The houses made up of mud, wood and thatch, remain susceptible to damage during heavy rains and floods, and require proper maintenance every year. Most house designs are typically deficient in proper ventilation. Besides, the design of a house includes the animal shed along with its fodder- store within it. This is purposely done to keep the domestic animals and their food properly protected from wild animals 4) Unmetalled roads and lack of modern communication network creates a unique problem. During rainy season, the settlements remain cut off and pose serious difficulties in providing emergency services. 5) It is area also difficult to provide adequate health and educational infrastructure for their large rural population. The problem is particularly serious where proper villagisation has not taken place and houses are scattered over a large area.